

CLAIMS

1. An evaporative emission treatment device comprising:
a housing; and
an adsorption member disposed in the housing, the adsorption member comprising an adsorption component comprising an activated carbon textile made from a novoloid precursor.
2. The evaporative emission treatment device of Claim 1, wherein the adsorption member comprises alternating layers of the adsorption component and a porous component.
3. The evaporative emission treatment device of Claim 2, wherein the adsorption component layer forms an outer layer of the adsorption member proximate to the housing.
4. The evaporative emission treatment device of Claim 2, wherein the porous component forms an outer layer of the adsorption member proximate to the housing.
5. The evaporative emissions treatment device of Claim 2, wherein the porous component layer comprises a reticulated polyurethane foam.
6. The evaporative emissions treatment device of Claim 2, wherein the adsorption component layer comprises a thickness of less than or equal to about 4 mm.
7. The evaporative emissions treatment device of Claim 2, wherein the porous component layer comprises a thickness of less than or equal to about 5 mm.
8. The evaporative emission treatment device of Claim 2, wherein the adsorption member comprises a helical cross-sectional geometry along a minor axis of the adsorber member.

9. The evaporative emission treatment device of Claim 1, wherein the adsorption member comprises stacked layers of the adsorption component and a porous component.

10. An evaporative emission treatment device, comprising:
a housing disposed around an adsorption member comprising an adsorption component comprising an activated carbon textile having a specific surface area (as measured by the BET method) of greater than or equal to about 1,000 m²/g and a tensile strength of greater than or equal to about 20 kg/mm².

11. The evaporative emission treatment device of Claim 10, wherein the adsorber member has a pressure drop across the adsorber member of less than or equal to about 1.5 kPa at a flow rate of 60 SLPM and a hydrocarbon emission of less than or equal to about 10 mg during a 24-hour period.

12. The evaporative emission treatment device of Claim 10, wherein the adsorption member comprises alternating layers of the adsorption component and a porous component.

13. The evaporative emission treatment device of Claim 10, wherein the adsorption component layer forms an outer layer of the adsorption member proximate to the housing.

14. The evaporative emission treatment device of Claim 10, wherein the porous component forms an outer layer of the adsorption member proximate to the housing.

15. The evaporative emissions treatment device of Claim 10, wherein the porous component layer comprises a reticulated polyurethane foam.

16. The evaporative emissions treatment device of Claim 10, wherein the adsorption component layer comprises a thickness of less than or equal to about 4 mm.

17. The evaporative emissions treatment device of Claim 10, wherein the porous component layer comprises a thickness of less than or equal to about 5 mm.

18. The evaporative emission treatment device of Claim 10, wherein the adsorption member comprises a helical cross-sectional geometry along a minor axis of the adsorber member.

19. The evaporative emission treatment device of Claim 10, wherein the adsorption member comprises stacked layers of the adsorption component and a porous component.

20. A method of making an evaporative emission treatment device, the method comprising:

forming an adsorption member comprising an adsorption component comprising an activated carbon textile made from a novoloid precursor; and
disposing the adsorption member in a housing.

21. The method of Claim 20, further comprising disposing the adsorption component adjacent a porous component and stacking the adsorption component in alternating layers with the porous component.

22. The method of Claim 20, further comprising disposing the adsorption component layer adjacent a porous component and rolling the adsorption component and the porous component to form a cylinder.